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via email: DJohnson@Tahera.com

Attention: Dan Johnson

Subject: Jericho Diamond Mine
Reply to NWB
Review Comments to Processed Kimberlite Management Plan

EBA Engineering Consultants Ltd.'s responses to questions and comments in NWB Letter dated October 10, 2006 regarding the Jericho Diamond Mine Processed Kimberlite Management Plan are presented below. The original NWB comments are in italics. EBA's reply follows each comment.

1. (Schedule D, Item 5(c)) TDC provided a construction implementation schedule for various PKCA containment structures within Section 5.0, Table 10 (page 18). Select structures are slated to begin construction after operation of the PKCA. What performance and operation characteristics will be used to benchmark when remaining water control or containment structures are to be constructed? The Board requests TDC to provide detailed discussion and description to address this issue.

The operational requirement and design intent for each of the containment structures were briefly introduced in Section 5.0 of the PKMP report (Jericho Project Processed Kimberlite Management Plan, February 2006, EBA). The construction schedule for these structures was preliminarily developed based on projected water/fine PK levels and expected water quality in the PKCA over the mine life. A number of assumptions were made in projecting the water/fine PK levels and predicting water quality when the report was prepared. These assumptions will be annually re-evaluated based on actual mine operational conditions, the mine plan, and other new available information during the mine operation. The construction schedule can be then adjusted, when required, based on updated projections of water and fine PK levels and observed/predicted water quality in the PKCA.

2. (Schedule D, Item 5(d)) Numerous water control and containment structures are schedule to be constructed in the near future. How and when does TDC intend to file detailed final designs and accompanying construction records for the additional water control and containment structures outlined in the report? The PKCA report stated that the North Dam is planned to be constructed in the fall of 2006 (Section 5.5 – North Dam; page 21). Has any construction of the North Dam occurred? The NWB requests an update in when work scheduled for the North Dam is to take place and how information related to the design of the North Dam will be communicated to the NWB.

The detailed design and construction drawings for all the structures to be constructed will be submitted to the Nunavut Water Board (NWB) 60 days prior to construction. The North Dam has not been constructed yet. The design of the North Dam is currently in progress and is expected to be submitted to the NWB prior to December 1.

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3. (Schedule D, Item 5(e)) TDC provided no discussion or details pertaining to the potential for discharge to the groundwater system from the PKCA. The Board requests additional discussion and detail to fulfill this licence requirement.

Permafrost is present throughout the Jericho Mine area except for limited areas belowlakes of substantial width and depth. A closed talik is expected to exist under the PKCA based on the width of Long Lake, and the permafrost thickness at the site. As a result, the groundwater around the PKCA is expected to exist only within the thin active layer when the ground is unfrozen during thawing seasons.

The design intent for the containment dams and berms along the perimeter of the PKCA is to eliminate seepage through the dams and berms from the PKCA to the outside environment. The performance of these structures will be monitored during the life of mine operation as stated in Section 6.0 of the PKMP report. In addition, the fine PK will be deposited from the perimeter berms around Cell A towards the center of Cell A such that the standing water will be displaced from these dams/berms enhancing permafrost growth into the exposed beaches. This will further limit the risk of seepage from the PKCA to the outside environment.

4. (Schedule D, Item 5(f)) TDC provided no discussion or detail on how to limit the accumulation of water against the containment dam structures of the PKCA until such time that the thermal monitoring program has demonstrated the integrity of all frozen core dams. This information has also not been provided in the design or construction specification reports for the west dam, divider dyke, or east and southeast dam. What criteria were employed to determine the integrity of the frozen core dams? Was the integrity of the frozen core dams ensured before accumulation of water against the dam structures? How will this information be communicated to the Board? The Board request additional discussion and detail to address this to fulfill this licence requirement.

The design thermal criterion of the frozen core dam (West Dam) was to maintain the base of the frozen core below -2°C during the design life of the dam with a head of water ponded on the upstream face. The design principals for frozen core dams are well established in technical literature and have proven successful for a number of dams at Ekati mine. The performance of these dams has been described in peer reviewed technical literature. Copies can be provided on request.

Ground temperature cables have been installed within the existing dams (West Dam and East Dam). Measured ground temperatures indicate that the performance of the dams has met the design intent and thermal requirements. Ground temperature cables will also be installed in the Southeast Dam and North Dam to monitor the ground temperatures.

The measured ground temperature data will be incorporated into the monthly monitoring data submitted to NWB by Tahera.

5. (Schedule D, Item 5 (g)) The Board requests additional detail or direction to the appropriate reference document and section where this provision has been satisfied.

The typical cross-section of two-staged construction of the Divider Dyke A was presented in Figure 9 of the PKMP report.

6. (Schedule D, Item 5(h)) The Board requests additional detail or direction to the appropriate reference document and section where this provision has been satisfied.

EBA's geothermal analysis results for the East and Southeast Dams were summarized in a separate report submitted to Tahera on January 26, 2006. The geothermal analysis results for the West Dam will be attached to a letter in responding to NWB's comments and submitted to NWB on October 26, 2006. The interim dam/ground temperatures during and after the construction of the West and East Dams have been monitored.

7. (Schedule H, Item 1 (b)) (Section 3.4 – Flocculants and Coagulants) Two different polymers have been specified to be used as a flocculant and coagulant. The MSDS has been provided in the PKMP document. Will these polymers have a negative impact on receiving water bodies at the anticipated loading rates? If TDC believes this information has been submitted in another document, the NWB invites TDC to appropriately reference the referenced document and the appropriate section within the referenced document where the information can be found to address concerns.

The polymers are used in the process plant thickening process. The potential hazards and toxicological and ecological information of the polymers were presented in Appendix B of the PKMP report. The ecological information indicates that the concentrations of free polymer required to elicit significant biological responses to fish/daphnia/algae is > 100 mg/L for the flocculant (SNF Flo Polymer AE 4500) and > 10 mg/L for the coagulant (SNF Flo Polymer CV4120B). The calculated overall concentration in the fluid (water plus fine PK) pumped to the PKCA is approximately 30 mg/L for the flocculant and 19 mg/L for the coagulant based on information presented in Table 2 of the PKMP report. The free concentration of the polymers in the water would be significant less since the polymer is bound to solid particles (Liber et al., 2003, "Acute and Chronic Toxicity of Two Wastewater Treatment Polymers to Lake Trout Fry, Salvelinus namaycush" draft report to Environmental Protection Branch, Environment Canada by Toxicology Centre, University of Saskatchewan, December 15, 2003). The information above suggests that the polymers used at the current rates at the Jericho Mine would not impose a significant risk to fish/daphnia/algae. The water quality and aquatic effects of the discharge are monitored as stipulated in the AEMP.

In addition, Liber et al. (2003) investigated the toxicity of two flocculant and coagulant polymers (MagnaFloc 156 and MagnaFloc 368) that were used at rates of 75 to 170 g/ton and 55 to 90 g/ton of kimberlite ore, respectively, in the Ekati Diamond Mine in 1999 to 2002 to clarify its processed kimberlite effluent, and discharged approximately 4 to 6 million m^3 of tailings (2.6 to 2.5 million m^3 liquid wastewater) per year. The following conclusions were made in the paper:

> "Results from the present study suggest that the discharge of low concentrations of MagnaFloc 156 and 368 in industrial process effluents should not represent a significant direct risk to fish that may inhabit the receiving environment. The concentrations of free polymer required to elicit significant biological responses in lake trout fry (≥75 mg/L for MagnaFloc 156 and ≥0.5 mg/L for Magnafloc 368) were substantially greater than those that can reasonably be expected to result from most industrial discharges. Even at high rates of

use, the vast majority of polymer will be bound to solid particles and thus not available to cause toxicity. …"

8a. (Schedule H, Item 1 (c)) (Section 4.3.3 – Dilution Ratio in Lake C3) The NWB understands that Tahera is using the PKCA as a disposal location for runoff from surrounding sumps, waste rock piles, tailings, treated sewage, etc. Controlled release of fluid from the PKCA will take place at the West Dam location to obtain a minimum 10:1 dilution at the edge of the mixing zone in Lake C3.

Final results of a water balance were provided which may have included the volume loadings into the PKCA in the analysis; however, the volumes discharged from each respective source was not provided and may be contained in a separate report (the NWB requests TDC to the appropriate reference the document and section where this information can be obtained if disclosed in a separate report). What are the volumes and concentration of constituents within the fluid, which discharge to the PKCA from each respective source?

The estimates of source concentrations for each respective source discharged into the PKCA was reported in the report "Estimates of Source Concentrations, Technical Memorandum I, Jericho Project, Nunavut" prepared by SRK Consulting (SRK) and submitted to Tahera Corporation (Tahera) in October 2003. A summary of source concentrations was presented in Table I.11 of the SRK report. The estimated monthly volume for each respective source was presented in Appendix A of the PKMP report.

The mass loadings of critical water quality constituents entering and discharging the PKCA were not provided. What water quality parameter(s) have been identified as critical parameters to obtain a minimum 10:1 dilution at the edge of the mixing zone in Lake C3 and what is the source of these constituents?

The estimates of receiving water quality for controlled discharge from the PKCA to the Stream C3 were presented in the report "Estimates of Receiving Water Quality for the Jericho Project, Nunavut" prepared by SRK Consulting (SRK) and submitted to Tahera Corporation (Tahera) in August 2004. The following conclusions were made in the SRK 2004 report:

> "Dilution modelling was used to estimate receiving water concentrations for TDS, major ions, metals and nutrients during mining operations and through the first 25 years of closure. The results indicate that, under typical operating conditions, concentrations of all parameters except cadmium are close to background, or within CCME guidelines. Cadmium is the only parameter which may exceed the CCME guidelines for freshwater aquatic life beyond a 200 metre mixing zone from the outlet of Stream C3. However, the predicted cadmium concentrations based on assuming background cadmium concentrations are at the detection limit of 0.00005 mg/L, are only slightly higher than the detection limit for cadmium, and are below the lowest effects level reported in the CCME guidelines fact sheet. Local exceedances of aluminum, copper and uranium may occur near the edge of the mixing zone under worst case discharge conditions, or if effluent concentrations approach the probable maximum values estimated for this site."

The major sources for cadmium would be from kimberlite ore and coarse kimberlite stockpiles based on estimates in the SRK 2003 report.

What operational changes within the PKCA (i.e., construction of berms, placement of tailings in different locations/cells, temporal loadings, etc.) are expected to impact quality of discharging water from the PKCA?

It is envisioned that operational changes within the PKCA such as construction of berms or placement of tailings in different locations/cells would not impact the quality of discharging water from the PKCA. However, it is expected that the actual quality of the discharging water would vary with time because of volume changes with time for various inflow sources.

TDC stated that the discharging volume of fluid from the PKCA was less than the values deduced in the water quality report completed by SRK (2004a). Was the water quality at the discharge location of the West Dam in the SRK (2004a) report representative of the PKCA operation over the life of the facility?

Various scenarios were studied in the SRK (2004a) report. These scenarios bounded the potential operation conditions of the PKCA over the life of the facility and during the post-closure stage.

8b. (Section 4.3.3 – Dilution Ratio in Lake C3) Discharge of fluid from the PKCA is to occur during the summer months at specified rates as determined to be less than that provided in the SRK (2004a) water quality report to achieve a minimum dilution of 10:1. Are there select water quality constituents measured at the PKCA discharge location that will be used as a marker in a set criterion to achieve the minimum 10:1 dilution? For example, will the concentration of select constituent be required to be lower than a predefined value before discharge from the west dam is permitted? If so, what are they and what are the details of this criterion. If not, will discharge of water be solely based on the results of the SRK (2004a) report? How representative are the SRK (2004a) assumptions in the analysis to the operation of the PKCA? The Board requests additional detail and discussion to address these issues.

The estimates of receiving water quality in the SRK (2004a) report provided favourable data in support of the planned mine operation and water discharge from the PKCA. It is expected that the various scenarios studied in the SRK (2004a) report might bound the operation conditions of the PKCA over the life of the facility. Nevertheless, the actual measured data from the water quality monitoring program will be used to verify the assumptions made in the SRK (2004a) report and to examine whether the measured data fell within the expected ranges.

All discharges to Stream C3 from the PKCA are to meet the effluent quality requirements, as specified in Part G (6) of the Type "A" Water Licence for the Jericho Mine.

9a. (Schedule H, Item 1 (e)) (Section 3- Fine PK Disposal Management) The characteristics (e.g., pipe size, flow rate, water quality, layout on site, etc.) and locations for spigots to dispose of tailings, discharge pipe to dispose of treated sewage water in the PKCA, and reclaim water line from the PKCA to the processing area from the PKCA are not provided in the PKCM report. Details of the location of these piping infrastructures are not provided in the drawings. If this information is provided in other documents, appropriate referencing which includes report title, section, and page number should be provided. If provided elsewhere, the Board requests a summary of key details to be included in the PKCM. The Board requests additional discussion on this issue

The approximate fine PK discharge locations are shown on the drawings (Figure 3 of the PKMP report). The discharge locations will be varied during operations to produce the fine PK slopes desired. The current discharge spigot is located at the upstream side of the south end of the East Dam in Cell A. The PK discharge pipeline is a 100 mm HDPE insulated and heat traced pipe. The

assumed flow rate was approximately 800 m^3/day for an annual production rate of 720,000 tonnes kimberlite ore in the PKMP report.

The treated sewage water line is discharged adjacent to the sewage treatment plant into the Cell A of the PKCA. The sewage treatment plant is located at the SE corner of the camp. The pipe size for the sewage line is similar to that for the fine PK discharge line. The assumed flow rate for the sewage line was 0.3 L/sec (or 26 m^3/day) in the PKMP report.

The reclaim line is installed downstream of the Divider Dyke A, and will be extended to the downstream of the Proposed Divider Dyke B into Cell C after the divider Dyke B is constructed. The reclaim water line is 100 mm diameter. The line is not heat traced, and is not expected to be used during the winter. It was assumed in the PKMP report that the daily reclaim water volume of approximately 470 m^3 will be pumped from Cell C to the process plant over June to September each year during the mine life.

A drawing shown the reclaim line and sewage line locations will be submitted to the NWB.

9b. (Section 4.2.4 – Seepage through Divider Dykes A and B) TDC assumed that "standing water elevation in Cell A will be controlled such that it will be below elevation, 523 m". This will be done by implementing an overflow system in Dyke A. However, Figure 8 depicts Cell A standing water perched above the tailings surface during the summer months. Will standing water be controlled during the winter months to limit ice occupying storage volume within the cell? Will standing water only be controlled by surface contouring or will there be additional means? If so, what are they? In addition to Dyke A, will Dyke B require an overflow system? What criteria will be used to benchmark if an overflow system for the dykes is required? These details have not been provided in the Divider Dyke A design report. Has an overflow system been considered in the analysis for assessing water and tailings volumes/elevations? If so, what characteristics of the overflow system were assumed? The Board request additional detail and description to address these issues.

The water elevations shown in Figure 8 of the PKMP report were based on the water balance analysis. The projected maximum standing water level in Cell A was 523.6 m. This elevation is higher than the design water level of 523.0 m. The actual water level will be maintained below 523.0 m. Standing water will be pushed far away from the dams/berms as the fine PK surfaces slope down from the dams/berms towards the Divider Dyke A and the center of Cell A.

The water balance has been updated with an assumption that no standing water in Cell A would be allowed above an elevation of 523.0 m and any extra free water in Cell A beyond the elevation would flow freely into Cell B through an overflow structure on the Divider Dyke A. With this change, the projected water elevations are below 523.0 m in Cell A and slightly higher than those shown in Figure 8 in 2009 for Cell B. The projected maximum water level in Cell B in 2009 is 518.85 m compared to 518.52 m to the previous water balance. There are virtually no changes to other values shown in Figure 8.

An overflow structure will be constructed on the top of the Divider Dyke A to control the standing water level in Cell A such that it will be below elevation 523 m. The design details and construction drawings will be submitted to NWB 60 days prior to construction.

The standing water in Cell A will be controlled by surface contouring of the fine PK discharge spigots during the winter months to limit burying of ice sheets/blocks beneath the fine PK.

9c. (Section 5.4.2 – Perimeter Berm Design) TDC stated that seepage will be collected on the downstream side of the berm if necessary. Why was the construction of a berm (therefore applied load) on the Divider Dyke A, East dam, and Southeast dam not considered in the stability analysis in the Divider Dyke A or East and Southeast design report? Why are there inconsistencies in the final design of these structures between the respective design reports submitted to the NWB? Will the stability of the dykes and dams be impacted by the construction of the perimeter berm and additional tailings and water loadings on the upstream face compared to that reported in the respective design reports? If so, how much? If not, why not? The Board requests additional detail and discussion to address this issue.

The proposed perimeter berms to be constructed over the Divider Dyke A, East Dam, and Southeast Dam will be designed to contain the fine PK only but not standing water in Cell A. The actual required height for the berms will depend on actual physical and mechanical properties (e.g. average density, surface slope) of the fine PK deposited or to be deposited into Cell A. The fine PK properties will be investigated in summer 2007.

The final design of the Stage 1 perimeter berms will be carried out in 2007 with detailed stability evaluations of both the berms and the underlain dams/dyke. The design documents and construction drawings will be submitted to NWB 60 days prior to construction.

9d. (Section 5.6 - Settling Pond Dam) TDC stated that an additional settling pond may be constructed downstream of the West Dam if additional suspended solids removal in the supernatant is required. The Board requests additional detail and discussion on the evaluation criteria (including quantifiable markers) that will be used to benchmark if a settling pond is required.

The water quality in the PKCA will be monitored to determine whether the measured concentrations of the suspended solids in the supernatant follow a clear trend approaching the upper limits specified in Part G (6) of the Type "A" Water Licence for the Jericho Mine. When the trend is observed, an additional settling pond may be constructed downstream of the West Dam to remove the additional suspended solids in the supernatant.

10. (Section 6.2 - Volume Occupation) TDC stated that fine PK will be sampled to determine if fines segregation is occurring to partner sampling for in-situ density and ice contents; however, there is no specification on density to be achieved. The Board requests additional detail to address this issue and how these fine PK properties will be measured, frequency of measurement (spatially and temporally), and the proposed mechanism TDC plans to report these results.

An effective settled dry density of 0.5 t/m^3 has been used in the solids balance of the facility that includes the consolidated fine PK and the winter placed frozen ice entrained fine PK, as described in Section 3.3.4 of the PKMP report. The actual average density of the deposited fine PK will be determined based on data from topographic survey over the top surface of the fine PK and the mine operation records.

Density sampling of the PK fines will also be done in summer 2007 as a check to the density of the tailings to ensure that the placement density meets or exceeds the assumptions used in the design.

Location of testing will be determined by the geotechnical engineer and will take into account accessibility to the areas, safety, depth of tailings, seasonal factors and other as may be determined by the geotechnical engineer to obtain a reasonable indication of in-situ densities. Upon review of the test results, additional sampling and testing of the fine PK may be required later.

A summary of the test results will be reported with the annual geotechnical inspection report submitted to NWB.

11. (Section 7.0 – Adaptive Management) TDC stated that dilution ratio for discharging fluid in Lake C3 will be calculated to determine performance of the system and that discharge rates may be adjusted to optimize the water quality. What criteria will be used to "optimize" discharge rates? How will this information be communicated to the Board?

The water quality for both the water in the PKCA and the receiving water bodies (e.g. Lake C3) is being or will be monitored during the mine life. These measured source concentration data can be used to evaluate the actual dilution ratios achieved in the receiving water bodies and to determine whether the water quality in the receiving water bodies meets the specified requirements. If required, the volume of the discharged water and the discharge timing may be regulated to meet the water quality requirements. This information will be summarized by Tahera in the monthly monitoring report submitted to NWB.

12. (Section 7.0 – Adaptive Management) TDC stated that placement of fine PK will be managed to reduce the amount of ice entrained within the fine PK. It was proposed that one method to achieve this was to dispose of fine PK under water; however, Section 4.2.4 stated that standing water will be limited within the PKCA. The Board requests additional detail and discussion on how this will be conducted and clarity on these inconsistencies.

This will be accomplished through a combination of both methods. The goal is to avoid entrapping large ice layers under a large cover of fine PK tailings. In the winter time, this can be done by depositing the fine tails under water where sufficient water depth exists and similarly avoiding depositing over shallow water areas that are frozen to the bottom.

Since relatively shallow standing water in winter in Cell A is projected, the under-water deposition of the fine PK in Cell A during winter may be not practical. Therefore, the standing water in Cell A of the PKCA will be limited to avoid burying of ice sheet/blocks during winter deposition of the fine PK. If practical, the fine PK may be deposited under water in winter in Cell B during late stage of the mine operation to reduce the amount of ice entrained within the fine PK.

13. The NWB requests all design drawings relevant to the PKCA be signed, stamped, and submitted to the Board.

Drawings issued for construction (signed and stamped) relevant to the PKCA will be submitted to the Board.

14. The NWB would like to reiterate an issue reported in a letter sent August 3rd, 2006 on matters related to Part H, Item 1. On June 26th, 2006 the NWB received a letter TDC Re: Notification of intent to discharge from the Processed Kimberlite Containment Area (PKCA) to Stream C3. As per condition H1 Tahera was to submit the PKCA Management Plan four (4) month prior to the first effluent discharge from the PKCA. The NWB would like

to remind TDC that the PKCA Management Plan referred to in Part H, Item 1 has not been approved by the Board and was received by the NWB on March 10th, 2006. July 10th, 2006 marks the date four months following the date the submission was received. TDC is to report to the NWB when this first discharge took place.

Discharge from the PKCA began on July 12, 2006, four months after the plan was submitted to the Board as per the condition in the water license.

A notification to intent to discharge from the PKCA was sent to the Inspector and the NWB on June 26, 2006 at least ten (10) days prior to the planned discharge from the PKCA (started July 12, 2006) as per section G, Item 5.

We trust this addresses the NWB comments. We welcome the opportunity to discuss them further at the scheduled meeting between NWB, EBA and Tahera.

Regards,
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